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| 10/540,124 | 06/02/2006 | Bernard Phillippe Albert Boitrel | 0508-1137 | 1073 |
| 466 7590 03/03/2010 YOUNG & THOMPSON 209 Madison Street Suite 500 Alexandria, VA 22314 | | | | |
| EXAMINER PACKARD, BENJAMIN J | | | | |
| ART UNIT | | PAPER NUMBER | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DocketingDept@young-thompson.com

Office Action Summary

Application No.

10/540,124

Applicant(s)BOITREL, BERNARD PHILIPPE
ALBERT**Examiner**

Benjamin Packard

Art Unit

1612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-38 is/are pending in the application.
- 4a) Of the above claim(s) 23-28 and 31-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-22, 29 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2pgs (09/20/05)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group I, previous claims 1-12 (now cancelled) and new claims 20-31, 37, and 38 directed to compound of formula (I) and compounds of formula (Ic) as the species election in the reply filed on 06/29/09 is acknowledged. The traversal is on the ground(s) that the prior art cited by Examiner is directed to compounds where the cyclic handles contain $-C(COOEt)_2-$ and the instant claims differ where the cyclic handles containing $-U-$, where U represents $C(Z,W)$ where Z and W are always different. This is not found persuasive because Didler further teaches decarboxylation of the agents, which while would result in one of the acid groups with the ethyl terminal group removed, resulting in a COO^- group.

The requirement is still deemed proper and is therefore made FINAL.

Claims 32-36 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected inventions, there being no allowable generic or linking claim.

Claims 23-28, 31, 37, and 38 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim.

Examiner notes the compounds of claim 31 have an alcohol at X, instead of CO as elected, but X is defined by independent claim 20 to be NH, O, CO, or CH₂. Thus, X cannot be C-OH, as it is not in the Markush list of substituents and are thus not currently examined.

Claim Rejections - 35 USC § 112- Indefinite

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 20-22 and 29-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention for two reasons.

First, it is unclear how the term "specific" serves to modify the already definite term "antibody" in any meaningful way.

Second, a broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 20 recites the

broad recitation to define Z as "an electroattractive group", and the claim also recites "such as CN, NO₂, or CO, or a CH₂NR₁R₂..." which is the narrower statement of the range/limitation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 20-22 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Didler et al (Eur J Organic Chem (2001) 1917-1926, IDS dated 09/20/05) in view of Wheelhouse et al (US 6,087,493)

Didler et al teaches different possibilities of TAPP, including $\alpha\alpha\beta\beta$ atropisomer of TAPP (scheme 4 pg 1921) and $\alpha\alpha\alpha\beta$ atropisomer of TAPP (scheme 1 pg 1918). Functionalization of porphyrins where zinc(II) completes its coordination sphere with the oxygen-donor ligand -COOEt₂ (pg 1921, right col).

Didler does not teach the $\alpha\beta\alpha\beta$ atropisomer form or carboxylic anion as a specific group oxygen-donor ligand.

Wheelhouse et al teaches using nitrophenyl groups in porphyrins as stabilizing ligands (see D20 cols 59-60) where the stabilizing ligands are to have an electron withdrawing group (col 18 lines 22-33).

Wheelhouse et al does not teach the AC, BD graft instantly claimed.

Where the purpose of the $-\text{COOEt}_2$ group of the primary reference is to provide a ligand with oxygen-donor properties to complete zinc(II) complex and the secondary reference teaches variation in oxygen-donating properties effects the resulting porphyrin's efficacy, it would be obvious to one of ordinary skill in the art to use other known oxygen donating ligands used in porphyrins to complete the metal complex as disclosed in the secondary reference in order to optimize the efficacy of the porphyrin. Further, where variation in the ligand bonding is disclosed, both the benzyl rings the ligands are attached and the orientation of the ligands, it would be obvious to modify the ligands among the various possibilities, given structural similarities, such as stereoisomers and structural isomers have been found to support a prima facie case of obviousness. See, e.g., In re May, 574 F.2d 1082, 1093-95, 197 USPQ 601, 610-11 (CCPA 1978) (stereoisomers); In re Wilder, 563 F.2d 457, 460, 195 USPQ 426, 429 (CCPA 1977) (adjacent homologs and structural isomers); also Boitrel et al (Eur J Inorg Chem, 2002, 1666-1672, IDS dated 09/20/05) at pg 1667 Fig 1, which shows $\alpha\beta\alpha\beta$ and $\alpha\alpha\beta\beta$ are known atropisomers of TAPP.

Conclusion

No claims allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin Packard whose telephone number is 571-270-3440. The examiner can normally be reached on M-F 8-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frederick Krass can be reached on 571-272-0580. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Benjamin Packard/
Examiner, Art Unit 1612

/Frederick Krass/
Supervisory Patent Examiner, Art Unit 1612